

# G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

## 1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME -----> **Methyl Methacrylate Inhibited  
8-15ppm MEHQ and 3% TMPTMA**

PRODUCT NUMBERS -----> 197302

TRADE NAME OR SYNONYMS ---> 2-Propenoic acid, 2-methyl, methyl ester  
Methyl 2-methylprop-2-enoate

CAS-NO: 80-62-6

CHEMICAL FAMILY: Methyl Ester

### 1.2 RELAVENT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

**RECOMMENDED USE:** Industrial: Intermediate, Use as a monomer in wet and dry polymer process, Use in adhesives and sealants, Ink component.

Consumer: End use in formulations,

**USES ADVISED AGAINST:** Use of the substance in any form other than as a reacted monomer within an imported polymer. Mixtures containing liquid monomer intended to come in contact with skin or nails.

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE  
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

### 1.4 Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29CFR 1910 (OSHA HCS)**

**Flammable liquids (Category 2), H225**

**Skin irritation (Category 2), H315**

**Skin sensitization (Category 1), H317**

**Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335**

**Acute aquatic toxicity (Category 3), H402**

## 2.2 GHS Label elements, including precautionary statements



Pictogram

GHS02 GHS07

Signal word: **DANGER**

### Hazard statement(s)

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H335 May cause respiratory irritation.  
H402 Harmful to aquatic life.

### Precautionary statement(s)

#### Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 +P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.

**P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.**

**Storage:**

**P403 + P233 Store in a well-ventilated place. Keep container tightly closed.**

**P403 + P235 Store in a well-ventilated place. Keep cool.**

**P405 Store locked up.**

**Disposal:**

**P501 Dispose of contents/ container to an approved waste disposal place**

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - Lachrymator.**

**3. INGREDIENTS**

**3.1 SUBSTANCE: Not applicable**

**3.2 MIXTURE:**

<b>Ingredient</b>	<b>CAS No.</b>	<b>% by WT. Range</b>	<b>CLASSIFICATION</b>
Methyl Methacrylate EC-No.201-297-1 Index-No.607-035-00-6 Reg.-No. 01-2119452498-28-XXXX	80-62-6	96.85 min.	Flammable liquids (Category 2), H225 Skin irritation (Category 2), H315 Skin sensitization (Category 1), H317 STOT-SE (Category 3) Respiratory System, H335 Acute aquatic toxicity (Category 3), H402
Trimethylolpropane Trimethacrylate Reg.-No. 01-2119542176-41-XXXX	3290-92-4 EC-No. 221-950-4	3.0	Acute aquatic toxicity (Category 2), H401 Chronic aquatic toxicity (Category 2), H411
Monomethyl Ether of Hydroquinone Index-No.604-044-00-7 Reg.-No. 01-2119541813-40-XXXX (Mequinol, MEHQ)	150-76-5 EC-No.205-769-8	8-15 ppm	Acute toxicity, Oral (Category 4), H301 Eye irritation (Category 2A), H319 Acute aquatic toxicity (Category 3), H401 Chronic aquatic toxicity (Category 3), H412
Other Ester Adducts		0.15	

**4. FIRST-AID MEASURES**

**4.1 EMERGENCY AND FIRST AID PROCEDURES:**

**INHALATION: Methyl Methacrylate**

**\*\*FIRST AID-** Remove from exposure to fresh air, restore breathing use oxygen if needed. Keep warm and quiet. Immediately notify a physician.

**EYE CONTACT (Splash): Methyl Methacrylate**

**\*\*FIRST AID-** Immediately flush eyes with water for 15 minutes. Hold eyelids open for complete irrigation. Remove contact lenses, if worn, after initial flush. Immediately take to a physician.

**SKIN CONTACT (Splash): Methyl Methacrylate**

**\*\*FIRST AID-** Wash affected area with soap and large amounts of water. Remove contaminated clothing. Consult a physician if irritation persists.

**INGESTION: Methyl Methacrylate**

**\*\*FIRST AID-** Patient should be made to drink 2 glasses of water. Do **NOT** induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician or poison control center, treat symptomatically.

#### **4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:**

**Eye:** Moderate irritation;

**Skin:** Moderate irritation; May be harmful if absorbed through skin.

**Inhalation:** Irritation of the respiratory tract. Repeated or prolonged exposure can cause acute nervous system depression characterized by headache, drowsiness, staggering gait, confusion, unconsciousness.

**Ingestion:** Can severely irritate mouth, throat, and stomach.

**Chronic:** Overexposure to methyl methacrylate vapors or mists may trigger asthma attacks in susceptible individuals. Prolonged and/or repeated exposure may lead to kidney, lung, and liver damage.

#### **4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**

Specific details on antidote: No recommendation given.

### **5. FIRE FIGHTING MEASURES**

Flash Point: 9°C (48°F) TCC

LEL %: 2.12 (V)

Auto-ignition Temp: 400°C (752°F)

UEL %: 12.5 (V)

UNIFORM FIRE CODE: Flammable Liquid Class IB

**5.1 SUITABLE EXTINGUISHING MEDIA:** Foam--> x CO2--> x Dry Chemical--> x Water-fog--> x Other-->

Unsuitable extinguishing media: Do not use waterjet.

**5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:** FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN

**EXPOSED TO HEAT OR FLAME. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. VAPOR-AIR MIXTURES ARE EXPLOSIVE.** Keep containers tightly closed. Flammable liquid; isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Heat from fire may initiate violent polymerization. Rapid uncontrolled polymerization can cause explosion. Containers that rupture explosively, due to polymerization, may auto-ignite.

**CONDITIONS OF FLAMMABILITY:** Flammable in the presence of a source of ignition when the temperature is above the flash point.

**HAZARDOUS COMBUSTION PRODUCTS:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

**5.3 ADVICE FOR FIREFIGHTERS:** Shut off source. Water-fog may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat. Wear NIOSH/MSHA approved self-contained breathing apparatus (SCBA) positive pressure and full fire-fighting turn out gear for exposure to vapors or products of combustion and in confined spaces. Fight advanced fires from a protected position.

## **6. ACCIDENTAL RELEASE MEASURES**

**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

### **6.2 ENVIRONMENTAL PRECAUTIONS:**

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system.

### **6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:**

Methods for cleanup and containment:

Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent such as clay or silica in spill area. If an odor or acidity problem exists, add lime or sodium bicarbonate. For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent. Remove contaminated soil to remove contaminated trace residues.

Methods for disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Flush with water to remove trace residue. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations. Keep all nonessential people away. Caution: Spontaneous polymerization can occur if material is released or mixed with incompatibles. Contaminated monomer may be unstable. Add inhibitor to prevent polymerization.

**REPORTABLE QUANTITY (RQ): 1000 POUNDS**

The Superfund Amendments and Reauthorization Act (SARA) Section 304 requires that a release equal to or greater than the reportable quantity for this substance be immediately reported to the local emergency planning committee and the state emergency response commission (40 CFR 355.40). If the release of this substance is reportable under CERCLA Section 103, the national response center must be notified immediately at (800) 424-8882 or (202) 426-2675 in the metropolitan Washington, D. C. area (40 CFR 302.6).

**6.4 REFERENCE TO OTHER SECTIONS:** See Sections 8 and 13.

**7. HANDLING AND STORAGE**

**7.1 PRECAUTIONS FOR SAFE HANDLING:** This material presents a fire hazard. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Do not take internally. Avoid prolonged or repeated contact with skin, eyes, and clothing. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Maintain contact with atmosphere of 5-21% oxygen. Do not use inert atmosphere as blanket. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close container.

**Advice on general occupational hygiene:**

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

**STATIC HAZARD**> Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 “Flammable and Combustible Liquids” and National Fire Protection Association (NFPA 77) “Recommended Practice on Static Electricity”.

**7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**

Under proper storage conditions a storage stability of 1 year is expected at ambient temperature. Store in closed containers away from direct sunlight.

Recommended storage temperature: 2 - 8°C Store large quantities only in buildings designed to comply with OSHA 1910.106.

Avoid storage under an oxygen free atmosphere. An air space is required above the liquid in all containers. Introduce air periodically in air space over liquid in all containers if stored over 6 months. Use monomer within 1 year. Conduct a inhibitor test on bulk material every month, drums and pails every 3 months. Keep containers tight and upright to prevent leakage. Do not store with incompatible materials. Keep containers closed when not in use.

**CONTAINER WARNINGS** > Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROL (PERSONAL PROTECTION)

### 8.1 CONTROL PARAMETERS:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Methyl Methacrylate EC-No.201-297-1 Index-No.607-035-00-6 Reg.-No. 01-2119452498-28-XXXX	80-62-6	96.85min.	50ppm TWA (ACGIH) 100ppm STEL (ACGIH) 100ppm TWA (OSHA)
Trimethylolpropane Trimethacrylate Reg.-No. 01-2119542176-41-XXXX	3290-92-4 EC-No. 221-950-4	3.0	1 mg/m3 TWA (WEEL)
Monomethyl Ether of Hydroquinone Index-No.604-044-00-7 Reg.-No. 01-2119541813-40-XXXX (Mequinol, MEHQ) Other Ester Adducts	150-76-5 EC-No.205-769-8	8-15ppm    0.15	5mg/m3TWA (ACGIH) 5mg/m3TWA (NIOSH)

Key: (PEL) = Permissible Exposure Limit OSHA  
 (TLV) = Threshold Limit Value OSHA & ACGIH  
 (STEL) = Short Term Exposure Limit ACGIH  
 (WEEL) = USA. Workplace Environmental Exposure Levels  
 (TWA) = Time Weighted Average  
 CAS = Chemical Abstracts Registry Number  
 IDLH = Immediate Danger to Life and Health  
 N.E. =None Established

## 8.2 EXPOSURE CONTROLS

**EXPOSURE GUIDELINES:** Consider the potential hazards of this material (Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

**ENGINEERING CONTROLS:** Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

**RESPIRATORY PROTECTION:** The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

For vapor concentrations 1 to 10 times ACGIH TWA use an air purifying NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times ACGIH TWA, in confined areas, and/or where vapor concentrations are unknown use an approved positive pressure full face-piece supplied air respirator.

**BODY CLOTHING:** Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

**SKIN PROTECTION:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 66 min

**HYGIENE:** Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

**EYE/FACE PROTECTION:** Use safety eyewear with splash guards or face shield. Shower and eyewash should be easily accessible to the work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Methyl Methacrylate 80-62-6

Appearance-----> Clear liquid

Color-----> Colorless



Odor-----> Sharp pungent odor  
 Odor Threshold----- > 0.5-1ppm  
 pH-----> No Data Available  
 Molecular Weight-----> 100.12  
 Melting/Freezing Point)-----> -48°C (-54°F)  
 Boiling Point ( °F)-----> 100°C (212°F)  
 Specific Gravity-----> 0.943@20°C (68°F)  
 Vapor Pressure-----> 28mmHg@20°C (68°F)  
 Vapor Density (air=1)-----> 3.46  
 Water Solubility-----> 1.5%  
 Partition Coefficient n-Octanol/Water-> log Pow: 1.38  
 Evaporation Rate (Butyl Acetate=1)----> >3  
 Flash Point-----> 9°C (48°F) - closed cup  
 Upper Flammability Limit-----> 12.5% (V)  
 Lower Flammability Limit-----> 2.12% (V)  
 Auto-Ignition Temperature-----> 400°C (752°F)  
 Decomposition Temperature-----> No data available  
 Viscosity-----> No data available  
 Explosive Properties-----> No data available  
 Oxidizing Properties-----> No data available

## 9.2 Other Information:

Surface tension-----> 28 mN/m at 20 °C (68 °F)

## 10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable (X) with heat Stable ( )  
 Polymerizes with evolution of heat. Avoid contact with incompatible materials. Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Check inhibitor content often adding to bulk liquid if needed. Do not blanket or mix with oxygen-free gas as it renders inhibitor ineffective. Stable under recommended storage conditions. Contains the following stabilizer(s): (Mequinol, MEHQ) (<=0.015 %)

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: Polymerizes readily unless inhibited. Vapors may form explosive mixture with air

HAZARDOUS POLYMERIZATION: May occur (X) Will not occur ( )  
 Polymerization may occur with excessive heat or in the absence of inhibitor. Uncontrolled polymerization can cause rapid evolution of heat and increased pressure which can result in violent rupture of storage vessels or containers

**10.4 CONDITIONS TO AVOID:** Excessive ageing, contamination with polymerization catalysts, oxygen free atmosphere, inhibitor depletion or UV light may cause polymerization, Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. May polymerize on exposure to light

**10.5 INCOMPATIBLE MATERIALS:** Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid, hydrogen peroxide and UV light.

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS:** Fumes, Smoke, Carbon Monoxide, carbon dioxide.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:**

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x

#### **ACUTE HEALTH EFFECTS:**

Effects of overexposure:

Eye> Moderate irritation;

Skin> Moderate irritation; May be harmful if absorbed through skin.

Inhalation> Irritation of the respiratory tract. Repeated or prolonged exposure can cause acute nervous system depression characterized by headache, drowsiness, staggering gait, confusion, unconsciousness.

Ingestion> Can severely irritate mouth, throat, and stomach.

Chronic: Overexposure to methyl methacrylate vapors or mists may trigger asthma attacks in susceptible individuals. Prolonged and/or repeated exposure may lead to kidney, lung, and liver damage.

#### **ACUTE TOXICITY:**

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

<b>Ingredient</b>	<b> Oral LD50 (Rat)</b>	<b> Skin LD50 (Rabbit)</b>	<b> Inhalation LC50</b>	<b> </b>
<b>Methyl</b>	<b>  7900mg/kg</b>	<b>  &gt;5000mg/kg</b>	<b>  78000mg/m<sup>3</sup>/4h</b>	<b> </b>

Methacrylate		(OECD Test 402)	
Trimethylolpropane	>2000mg/kg	>2000mg/kg	N.D.
Trimethacrylate		(OECD Test 402)	
p-Methoxyphenol	N.D.	>2000mg/kg	N.D.

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**Methyl Methacrylate 80-62-6**

**SKIN CORROSION/IRRITATION:** Skin - Rabbit Result: Irritating to skin. - 4 h

**SERIOUS EYE DAMAGE/EYE IRRITATION:** Eyes - Rabbit Result: No eye irritation

**RESPIRATORY OR SKIN SENSITIZATION:** in vivo assay – Mouse; May cause allergic skin reaction. (OECD Test Guideline 429)

**MUTAGENIC EFFECTS:** Ames test *S. typhimurium* Result: negative (OECD Test Guideline 478) Mouse - male Result: negative

**CARCINOGEN STATUS:** Animal testing indicates that this compound does not have carcinogenic effects. There is no evidence that methyl methacrylate is carcinogenic to humans following chronic inhalation or skin contact workplace exposures.

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**REPRODUCTIVE TOXICITY:** Developmental Toxicity - Rat - Inhalation No significant adverse effects were reported

**Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System)** May cause respiratory irritation.

**Specific target organ toxicity (STOT-RE)- repeated exposure (Globally Harmonized System)** no data available

**ASPIRATION HAZARD:** No data available

**11.2 ADDITIONAL INFORMATION:**

**Known effects on other illnesses:** In a retrospective study of the effects of exposure to Ethyl Acrylate and Methyl Methacrylate on workers hired in one plant between 1933 and 1945 a higher than expected incidence of colorectal cancer mortality was observed.

A study on workers hired after 1945 in the same plant, and a study on workers hired after 1942 in a second plant did not show an increased risk of colorectal cancer mortality.

Recent studies in animals have shown that high exposures do not produce embryotoxicity or fetotoxicity nor teratogenic effects.

**Trimethylolpropane Trimethacrylate 3290-92-4**

**SKIN CORROSION/IRRITATION:** Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

**SERIOUS EYE DAMAGE/EYE IRRITATION:** Eyes - Rabbit Result: No eye irritation -

24 h (OECD Test Guideline 405)

**RESPIRATORY OR SKIN SENSITIZATION: Maximization Test - Guinea pig Result: Does not cause skin sensitization. (OECD Test Guideline 406)**

**MUTAGENIC EFFECTS: Ames test S. typhimurium Result: negative Mutagenicity (micronucleus test) Mouse - male and female Result: negative**

**CARCINOGEN STATUS:**

**IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**

**NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**

**OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**

**REPRODUCTIVE TOXICITY: No data available**

**ASPIRATION HAZARD: No data available**

**11.2 ADDITIONAL INFORMATION: Repeated dose toxicity Rat - male and female - Oral - NOAEL: > 900 mg/kg**

**Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.**

## **12. ECOLOGICAL INFORMATION**

### **Methyl Methacrylate 80-62-6**

#### **12.1 AQUATIC TOXICITY:**

**Toxicity to fish:**

**LC50 - Lepomis macrochirus (Bluegill) - 283mg/l - 96 h**

**Toxicity to daphnia and other aquatic invertebrates:**

**EC50 - Daphnia magna (Water flea) - 69mg/l – 48 h**

**Toxicity to algae:**

**EC50 - Pseudokirchneriella subcapitata (green algae) - >110mg/l - 72 h**

**(OECD Test Guideline 201)**

**12.2 PERSISTENCE AND DEGRADABILITY: aerobic - Exposure time 14 d Result: 94 % - Readily biodegradable. (OECD Test Guideline 301C)**

**Biological Oxygen Demand (BOD): This product is partially biodegradable in water: BOD 0.14g/g-0.9g/g**

**12.3 BIOACCUMULATIVE POTENTIAL: The log n-octanol/water partition coefficient for Methyl Methacrylate is: log Pow: 1.38 This suggests a low potential to bio-accumulate.**

**12.4 MOBILITY IN SOIL: This product is predicted to have low mobility in soil. MMA is weakly absorbed into the soil and less readily desorbed.**

**This product is substantially removed in biological treatment systems.**

#### **12.5 RESULTS OF PBT AND vPvB :**

**PBT assessment results: This substance is not classified as PBT or vPvB.**

**12.6 OTHER ADVERSE EFFECTS: Harmful to aquatic life.**

## **Trimethylolpropane Trimethacrylate 3290-92-4**

### **12.1 AQUATIC TOXICITY:**

Toxicity to fish:

LC50 - Oncorhynchus mykiss (rainbow trout) - 2 mg/l - 96 h Flow through test (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - > 9.22 mg/l - 48 h Immobilization (OECD Test Guideline 202)

Toxicity to algae: NOEC - Pseudokirchneriella subcapitata (green algae) - 0.177 mg/l - 72 h Growth inhibition (OECD Test Guideline 201)

Toxicity to bacteria:

EC50 - Sludge Treatment - > 1,000 mg/l - 3 h Respiration inhibition (OECD Test Guideline 209)

### **12.2 PERSISTANCE AND DEGRADABILITY:**

Biodegradability aerobic - Exposure time 28 d Result: 53 % - Not readily biodegradable. (OECD Test Guideline 301B)

**12.3 BIOACCUMULATIVE POTENTIAL:** No data available

**12.4 MOBILITY IN SOIL:** No data available

**12.5 RESULTS OF PBT AND vPvB:**

PBT assessment results: This substance is not classified as PBT or vPvB.

**12.6 OTHER ADVERSE EFFECTS:** Toxic to aquatic life with long lasting effects.

## **13. DISPOSAL CONSIDERATIONS**

**13.1 WASTE TREATMENT METHODS** > Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time of disposition. Dispose in accordance with all applicable disposal regulations. After the addition of excess inhibitor, incinerate under controlled conditions in a permitted facility.

**CONTAMINATED PACKAGING:** Dispose of as unused product

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID number is: U162.

**DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262**

## **14. TRANSPORT INFORMATION**

Land Transport (DOT)

- 14.1 USDOT ID Number-----> UN1247
- 14.2 USDOT Shipping Name-----> Methyl Methacrylate monomer, stabilized
- 14.3 USDOT Hazard Classification-----> 3 (Flammable Liquid)  
USDOT Label Codes-----> 3
- 14.4 USDOT Package Code-----> II
- 14.5 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> None  
Emergency Response Guide-----> 129P  
Reportable Quantity-----> 1000lbs.

**Sea Transport (IMDG)**

- 14.1 ID Number-----> UN1247
- 14.2 Proper shipping name-----> METHYL METHACRYLATE MONOMER,  
STABILIZED
- 14.3 Hazard Classification-----> 3 (Flammable Liquid)  
Label Codes-----> 3
- 14.4 Package Code-----> II
- 14.5 Marine Pollutant-----> No
- 14.6 Special precautions for user-----> No  
EMS-Number-----> F-E, S-D

**Air Transport (IATA)**

- 14.1 ID Number-----> UN1247
- 14.2 Proper shipping name-----> Methyl Methacrylate monomer, stabilized
- 14.3 Hazard Classification-----> 3 (Flammable Liquid)  
Label Codes-----> 3
- 14.4 Package Code-----> II
- 14.5 Environmental hazard-----> None
- 14.6 Special precautions for user-----> None

**15. REGULATORY INFORMATION**

**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION  
SPECIFIC FOR THE SUBSTANCE OR MIXTURE:**

**SARA TITLE III (Superfund Amendment and Reauthorization Act)**

**SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed**

**SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed Methyl Methacrylate CAS 80-62-6**

**SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Chronic Health Hazard, Fire Hazard**

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)**

**SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Listed Reportable Quantity – 1000lbs.**

**SECTION 101(14) Reportable Quantity: 1000lbs.**

**Massachusetts Right to Know Components**

**Methyl methacrylate CAS-No.80-62-6**

**Trimethylolpropane Trimethacrylate 3290-92-4**

**Mequinol CAS-No.150-76-5**

**Pennsylvania Right to Know Components**

**Methyl methacrylate CAS-No.80-62-6**

**Trimethylolpropane Trimethacrylate 3290-92-4**

**Mequinol CAS-No.150-76-5**

**New Jersey Right to Know Components**

**Methyl methacrylate CAS-No.80-62-6**

**Trimethylolpropane Trimethacrylate 3290-92-4**

**Mequinol CAS-No.150-76-5**

**California Prop. 65 Components**

**This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.**

**TSCA (Toxic Substance Control Act)**

**Methyl Methacrylate CAS 80-62-6, Trimethylolpropane Trimethacrylate 3290-92-4 and Mequinol CAS-No.150-76-5 are listed on the TSCA Inventory.**

**Methyl Methacrylate FDA Indirect Food Contact Approvals:**

**21CFR175.105, 21CFR175.210, 21CFR175.300, 21CFR175.320, 21CFR175.360, 21CFR176.170, 21CFR176.180, 21CFR176.210, 21CFR177.1010, 21CFR177.1030, 21CFR177.1200, 21CFR177.1630, 21CFR177.1830, 21CFR177.2000, 21CFR177.2420, 21CFR177.2465 21CFR178.3790, 21CFR179.45, FDA list of indirect additives used in food contact substances.**

**Puerto Rico**

**15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has not been carried out for this substance.**

## **16. OTHER INFORMATION:**

**HMIS (Hazardous Materials Identification System)**

**Hazard Rating:**

**4-Extreme**

**3-High**  
**2-Moderate**  
**1-Slight**  
**0-Insignificant**

**NFPA RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0**  
**HMIS RATINGS (SCALE 0-4): Health=2 Fire=3 Reactivity=0 PPE=H**

**Hazard statement(s) from Section 2 and 3:**

**H225 Highly flammable liquid and vapor.**

**H315 Causes skin irritation.**

**H317 May cause an allergic skin reaction.**

**H335 May cause respiratory irritation.**

**H402 Harmful to aquatic life.**

**Date of preparation-> September 1, 2017**

**Revision Number----> 1.3**

**Revision Content----> Updated Sections: 1, 10, 11, and 16**

**Revision Date-----> April 12, 2019**

**Prepared by-----> T.G. Fenstermaker, Jr.**

**Acronyms:**

ACGIH - American Conference of Governmental Industrial Hygienists  
AIHA - American Industrial Hygiene Association  
ANSI - American Nation Standards Institute  
API - American Petroleum Institute  
CERCLA - Comprehensive Emergency Response, Compensation, and Liability Act  
DOT - U.S. Department of Transportation  
EPA - U.S. Environmental Protection Agency  
HMIS - Hazardous Materials Information System  
IARC - International Agency For Research On Cancer  
MSHA - Mine Safety and Health Administration  
NFPA - National Fire Protection Association  
NIOSH - National Institute of Occupational Safety and Health  
NOIC - Notice of Intended Change (Proposed change to ACGIH TLV)  
NTP - National Toxicology Program  
OPA - Oil Pollution Act of 1990  
OSHA - U.S. Occupational Safety & Health Administration  
PEL - Permissible Exposure Limit (OSHA)  
RCRA - Resource Conservation and Recovery Act  
REL - Recommended Exposure Limit (NIOSH)  
SARA - Superfund Amendments and Reauthorization Act of 1986 Title III  
SCBA - Self-Contained Breathing Apparatus  
STEL - Short-Term Exposure Limit (generally 15 minutes)  
TLV - Threshold Limit Value  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average (8hr.)  
WHMIS - Canadian Workplace Hazardous Materials Information System

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